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Report No. 131500-602 14 January 1977



INTERIM TEST REPORT
ON THE IMPACT TEST OF THE ANCILLARY GROUP
FOR THE
AN/TRN-41 TACAN NAVIGATIONAL SET

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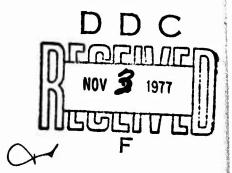
Department of the Air Force

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Contract No. F19628-75-C-0200 CDRL Item A00Y SECURITY CLASSIFICATION OF THIS PAGE (When Date Entered) **READ INSTRUCTIONS** REPORT DOCUMENTATION PAGE BEFORE COMPLETING FORM I. REPORT NUMBER 2. GOVT ACCESSION NO. ESDHTR-77-301 TYPE OF REPORT A REGIOD COVERED TITLE (and Subtitle) Interim Test Report on the Impact of the Ancillary Group for the AN/TRN-41 TACAN Navigational Set • 8. CONTRACT OR GRANT NUMBER(+) 7. AUTHOR(#) F19628-75-C-0200 NONE 9. PERFORMING ORGANIZATION NAME AND ADDRESS E-Systems, Inc., Montek Division 2268 South 3270 West Salt Lake City, Utah 84119 11. CONTROLLING OFFICE NAME AND ADDRESS 12. REPORT DATE 14 January 677 Electronic Systems Division (AFSC) Hanscom AFB, Ma 01731 14. MONITORING AGENCY NAME & ADDRESS(II different from Controlling Office) Unclassified 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE Distribution limited to U.S. Government agencies only; Reason: Test and Evaluation. 13 January 1977. Other requests for this document must be referred to Department of the Air Force, Hq ESD (AFSC), Hanscom AFB, Ma 01731, Attention: DRI. 17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) 18. SUPPLEMENTARY NOTES 19. KEY WORDS (Continue on reverse side if necessary and identify by block number) AN/TRN-41 TACAN Navigational Set 20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This test report is an interim report defining the failures and the proposed corrective action resulting from the impact test on the ancillary group for the AN/TRN-41 TACAN Navigational Set.

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INTERIM TEST REPORT ON THE IMPACT TEST OF THE ANCILLARY GROUP FOR THE AN/TRN-41 TACAN NAVIGATIONAL SET

This test report is an interim report defining the failures and the proposed corrective action resulting from the impact test on the ancillary group for the AN/TRN-41 TACAN Navigational Set.

- 1. Test Identification. Impact drop test of 16 feet, as defined in Appendix V-B (impact test procedure) of the Equipment Test Plan for Navigational Set, TACAN, AN/TRN-41.
- 2. Functional Purpose of Test. AN/TRN-41 system qualification.
- 3. Test Objectives. To demonstrate that the system meets the requirements of Specification No. 404L-701-5017A, Part 1, paragraph 3.2.5.2.2 (20 August 1976).
- 4. Description of Test Article. Airdroppable configuration of the ancillary group weighs 56 pounds and consists of the following:

Antenna Support Assembly
BB-451 Battery and Adapter
Interconnecting Cables and ground stake
Manportable Packing
Airdroppable Packing

- 5. Summary of Test Results. The only significant damage sustained as a result of this test was bending of the battery adapter (connector bracket). The damaged adapter was still functional.
- 6. Description of the Test Setup. The airdroppable package containing the ancillary group was dropped 16 feet on a two-inch thick plywood, backed by concrete floor. The unit was dropped 10 times and a quick release hook and drop tester mechanism was used in accomplishing the drops.

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- 7. Photographs. See Attachment 1.
- 8. Test Equipment. None.
- 9. Test Data. See Attachment 2.
- 10. Test Condition. Not Applicable.
- 11. Discussion of Test Results. The protection offered by the airdroppable package appears to be adequate for this unit; however, this test will have to be repeated because of a redesign effort on the manportable packaging for this unit. The changes that will be made to the manportable packing will provide better protection for the battery adapter.

12. Certification. The data sheets shown in Attachment 2 have been signed by a Montek Quality Assurance representative and a DCAS representative, certifying that the test results are authentic, accurate, current and in accordance with the related test plan.

ATTACHMENT 1 TEST SITE PHOTOGRAPH



16-FOOT DROP TEST - ANCILLARY GROUP

ATTACHMENT 2 TEST DATA

DATA SHEET IMPACT

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DAIL		IV Life	

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ANTENNA; AIR DROP CONFIGURATION												
ANTENNA SUPPORT ASSY CABLES AND BATTERY; AIR DROP CONFIGURATION	V	~	\ <u>\</u>	V	~	<u>ا</u>	-	-	-	-	ver attacked shub.	

TECHNICIAN Dild	DATE 12/10/26
ENGINEER Blate Discepton	DATE 12/16/76
DA REPRESENTATIVE Monnie Fraile	DATE 12-16-76
DCASD The Month	DATE 12-16 76

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DISCREPANCY AND REWORK RECORD ACTIVITIES

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DISCREPANCY AND REWORK RECORD ACTIVITIES

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THE HOLDING ROD OF THE HANDLE HAS SHIFTED TOWARDS II(6) CONNECTOR APPROX. 1/4" 2 THE (4) MOUNTING SCREWS THE II(6) COVER ARE ALL BENT TOWARDS THE HANDLE 3. JIGO COVER TS BENT IN ALL AROUND CONNECTOR APPROX. "/4" 4 JI (6) COVER IS FOLDED TOWARDS HANDLE ROD BY 1/4" 5 JIGO THE COVER GASKET IS CUT SEVERAL PLACES

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